

December 19, 1975

SOIL TESTING SERVICES, INC.

111 PFINGSTEN ROAD NORTHBROOK, ILLINOIS 60062
PHONE Chicago 312-273-5440 Northbrook 312-272-6520

Arthur G. McKee & Company
10 South Riverside Plaza
Chicago, Illinois 60606

Attention: Mr. Anthony DelGuidice

STS Job No. 17030-B

Reference: Subsurface Investigation for the Proposed Plant Expansion - Best
Foods, 2816 S. Kilbourn Avenue in Chicago, Illinois

Gentlemen:

We are submitting, herewith the results of the subsurface investigation performed at the above referenced plant site. If there are any questions with regard to the contents of this report, or if we can be of further service to you in any way, please do not hesitate to contact us.

Very truly yours,

SOIL TESTING SERVICES, INC.

Sylvio J. Pollici
Sylvio J. Pollici, P.E.
Senior Project Engineer

Safdar A. Gill
Safdar A. Gill, Ph.D., P.E.
Chief Engineer

SJP/sb

EPA Region 5 Records Ctr.



306129

SUBSURFACE INVESTIGATION

FOR

**PROPOSED PLANT EXPANSION
BEST FOODS
2816 SOUTH KILBOURN AVENUE
CHICAGO, ILLINOIS**

FOR

**Arthur G. McKee & Company
10 South Riverside Plaza
Chicago, Illinois**

BY

**SOIL TESTING SERVICES, INC.
111 Pfingsten Road
Northbrook, Illinois 60062**

STS JOB NO. 17030-B

December 19, 1975

SOIL TESTING SERVICES, INC.

111 PFINGSTEN ROAD NORTHBROOK, ILLINOIS 60062
PHONE Chicago 312-273-5440 Northbrook 312-272-6520

Arthur G. McKee & Company
10 South Riverside Plaza
Chicago, Illinois 60606

Attention: Mr. Anthony DelGuidice

STS Job No. 17030-B

Reference: Subsurface Investigation for the Proposed Plant Expansion - Best
Foods, 2816 S. Kilbourn Avenue in Chicago, Illinois

Gentlemen:

We are submitting, herewith the results of the subsurface investigation performed at the above referenced plant site. If there are any questions with regard to the contents of this report, or if we can be of further service to you in any way, please do not hesitate to contact us.

Very truly yours,

SOIL TESTING SERVICES, INC.

Sylvio J. Pollici
Sylvio J. Pollici, P.E.
Senior Project Engineer

Safdar A. Gill
Safdar A. Gill, Ph.D., P.E.
Chief Engineer

SJP/sb

INTRODUCTION

The contents of this report are based upon the results of fourteen (14) soil borings performed within an area immediately north of the existing Best Foods plant, 2816 South Kilbourn Avenue in Chicago, Illinois. The borings were located in accordance with dimensions shown in the site plan furnished to us and as noted. The approximate location diagram showing the location of the borings is appended. Surface elevation at the location of each boring is referenced to elevation +100 assigned to the first floor level of the Margarine building.

According to our understanding, the proposed structure will be a precast concrete construction, with masonry exterior walls and will be one story high (24 ft. clear height) except for the second level mezzanine areas, one along a portion of the south side and the other within the northwest corner. A slab-on-grade construction (no basement) is proposed at dock height. Thus, it is possible to predict that some fill will be required over the present grade. Floor pressures due to the live load are estimated to be on the order of 500 psf on average. The columns will be placed on 40 ft. x 50 ft. bays typically and will carry loads up to 220 kips except within the mezzanine areas where loads up to 400 kips are anticipated. Elevated storage tanks, applying loads on the order of 250 kips, are proposed in the general location of borings 13 and 7.

The purpose of this report is to describe the soil conditions encountered, to analyze and evaluate the results of the test data, and to make recommendations regarding foundation design and construction procedures.

SUBSURFACE INVESTIGATION PROCEDURES

The fourteen soil borings were performed by a rotary type drilling rig. Borehole advance and cleanup were carried out by various cutting bits and circulating water. Casing was used, wherever necessary, to maintain the boreholes open. Due to the prevailing cohesive nature of the materials encountered, most of the soil sampling was performed by means of the shelby tube sampling procedure and in accordance with ASTM Specification D 1587. A few split-spoon samples were obtained and in accordance with ASTM Specification D 1586. Bedrock coring was performed, as requested, at the location of borings 1, 7, and 13. The coring was done in accordance with ASTM Specification D-2113. Copies of the above referenced ASTM Specifications are appended.

TESTING PROGRAM

The natural moisture content was determined, generally, on the representative samples obtained. The undrained compressive strength of the essentially cohesive soils was, for the most part, estimated by means of the static penetrometer. For a few of the samples, the undrained compressive strength was determined

directly by means of the unconfined compression test. These latter samples were also tested for unit dry weight. The results of the tests are shown on the attached boring logs and also in the three soil profiles included in the appendix. After completion of the testing program, each sample was examined by experienced soil engineers and classified on the basis of texture and plasticity in accordance with the Unified Soil Classification system. The group symbol according to this system of classification is shown in parentheses following the soil description on the boring logs. For the terminology used in the soil description, reference may be made to the General Notes, attached with this report.

The procedures for preparing final logs from the field logs and laboratory test results are described on the sheet entitled "Procedures Regarding Field Logs, Laboratory Data Sheets and Samples", included in the appendix of this report.

SITE & SUBSURFACE CONDITIONS

The site investigated is relatively flat, sloping gently from the west towards the east. Within the portion adjacent to the west side, fill, cinders primarily, are virtually exposed at the surface. Towards the east the borings were drilled through existing pavement.

For specific conditions at the location of each boring, the reader is referred to each of the boring logs appended. All the fourteen borings were included in three soil profiles that were drawn in the east-west direction. Each profile shows the conditions with respect to an approximate configuration of existing surface, variations in the level of the various significant strata, and for a few places, the perched water level encountered during borehole advance is also noted. Significant soil parameters are shown for ready reference. The profiles also show the recommended bearing level for foundations designed for 5,000 psf and 12,000 psf as well as the approximate weighted average elevation level of the recommended bearing levels along each profile. It should be noted that the strata lines representing boundaries between soil types and/or conditions are only approximate and that in situ, the actual transition may be gradual. Also, where discontinuity of a strata occurs, this discontinuity is represented schematically only (not to scale).

Since it was possible to establish a reasonable degree of soil continuity and conditions along each profile the reader is referred to the soil profiles for soil description and conditions. For specific description of the bedrock condition, please refer to the respective boring logs.

Remarks

1. Fill & Underlying Topsoil - As noted in the profiles, cinder fill (crushed

stone at B-8) is exposed at the surface within the west side and overlies a layer of sand fill along the further west line of borings. According to the borings, where fill is exposed at the surface the fill material was placed upon natural topsoil. In accordance with the borings, the original topsoil was apparently stripped under the areas paved and the space vacated by the topsoil was replaced with a clay fill. The worst topsoil condition at the location of the borings was disclosed at B-4 (1 ft. thick layer, water content near 42% and of relatively soft consistency).

2. Bedrock - The surface of the bedrock was disclosed at elevation 80 approximately along the west side and on the basis of the borings, it dips towards the east being close to elevation 71 at B-13. Essentially clayey materials seem to prevail directly on the surface of the bedrock within the western portion of the site whereas, and on the basis of the conditions near the end of boring 14 which are actually shown at the location of boring 13, it is possible to predict that silty materials overlay the bedrock along the eastern portion of the site. These silty deposits are probably water bearing. On the basis of the coring data the bedrock is adequately sound.

GROUND WATER TABLE CONDITIONS

Conditions at the site provide for the existence of a perched water condition within the lower level of the fill. The reason is because the fill is relatively

pervious and undoubtedly water of precipitation can infiltrate through this relatively pervious material. This ground water condition was verified during drilling at the location of borings B-1 through 6 and also at boring 10, and as already mentioned, originates from surface infiltration. The water so stored is unable to seep towards the continuous ground water due to the presence of relatively impervious barrier which at the site investigated, most likely and primarily, the yellow brown and light gray clayey layer which is moderately plastic and quite impervious. The continuous ground water is located at a level probably lower than elevation 90 generally. This water level, which varies only slightly throughout the year, is likely to be of minor significance during construction of foundations placed on soils. Infiltration from the perched water is also likely to be of minor effect and when it occurs, is likely that it can be handled by normal construction procedures. The perched water level is anticipated to vary throughout the year, the variation dependent upon precipitation, infiltration and evaporation.

ANALYSIS & RECOMMENDATIONS

Foundations

In the profiles included in the appendix, two recommended bearing levels in soils are traced. The first level is located at elevations varying between 91.5 and 94 and the bearing material at the aforementioned levels consist

primarily of a brown and gray silty clay with water content varying from 16 to 20% and of a very tough to hard consistency. For foundations so placed, we recommend designing for a net allowable soil bearing pressure not to exceed 5,000 psf. The second level is located between elevations 85 and 87 and these numbers refer to a weighted average elevation level because in actuality, at the location of the borings, the levels were found to vary from as deep as elevation 83 (borings 8 and 10) to as shallow as elevation 89.5 (borings 1 and 9). The bearing material consists primarily of a gray silty clay with varying amounts of sand, of a hard to very hard consistency, and with water content normally less than 16%. For foundations so placed we recommend designing for a net bearing pressure not to exceed 12,000 psf.

It is apparent that if the final subgrade level for the slab is going to be at a level close to elevation 100, that support of the foundations designed for 12,000 psf is likely to be a more economical solution than foundations designed for 5,000 psf. For a slab-on-grade close to elevation 100, both solutions involve foundations placed at a level somewhat too deep for a footing foundation construction. Drilled pier foundations would be most feasible.

Regarding support at other levels, the relatively shallow yellow brown and slight gray silty clay, which underlies topsoil within the western portion of the site, and clay fill, or in some places is the pavement base, is suitable for supporting foundations designed for a pressure that we recommend not to

exceed 3,000 psf. However, the yellow brown and light gray silty clay material has a relatively high water content and is susceptible to compress more under the recommended maximum bearing pressure of 3,000 psf than the two clayey deposits previously recommended for bearing support. Regarding supporting of the structure upon the surface of the bedrock, this is also feasible. However, the possibility of construction difficulties may be anticipated within the eastern portion of the site because of the presence of silty materials on the surface of the bedrock. These silty deposits are water bearing and as such may be difficult to handle during construction. Straight shafts extend to the surface of the bedrock can be designed on the basis of an allowable bearing pressure of 100 tsf. However, we recommend that test caissons be performed within the eastern portion of the site in order to verify whether difficulties will be experienced during construction.

Slab on Grade

Within the areas presently paved, and on the basis of the borings, it appears that the topsoil was stripped and the fill material underlying the pavement base is of sufficient strength to support new fill and future slab pressures. The main question remains in those areas where the fill is exposed at the surface because topsoil was encountered below these areas, and some of the topsoil has a relatively high water content and is of soft consistency (boring 4 and boring 6). We estimate that the addition of the new fill, slab and live loads on the slab on the order of 500 psf may lead to compression of the topsoil

found at B-4 and B-6 to amounts between 1 in. and $1\frac{1}{2}$ in. If settlement of this magnitude cannot be tolerated, then stripping of the existing topsoil is recommended. On the other hand, if these movements can be tolerated, we recommend that a proofrolling test be carried out over the existing fill by means of a heavy vibratory roller such as the Raygo model 400 or equivalent. Within the areas where subsidence under these vibratory effects is pronounced local correction, which may include replacement of materials, will be required. This operation should be performed in the presence of an experienced soil engineer. Once the surface compaction is completed, fill may be placed to establish the final grade. The fill that is required to establish final grade should be placed in lifts not to exceed 12 in. in loose thickness if granular, or 9 in. in loose thickness if clayey, and should be compacted to a minimum of 95% of the maximum density in accordance with ASTM D 1557 or to a minimum of 75% relative density in accordance with ASTM D 2049 for clay and granular fills, respectively. The slab should be poured independently of the foundation walls and we recommend that the slab panels be keyed at the joints in order to provide for shear transfer along those joints and thus to assure a continuity of surfacing between the panels should some settlement occur.

If in some of the areas actual lowering of the existing grade would be required in order to establish final grade we recommend that underlying topsoil be removed. We recommend that all the slabs have a 4 in. minimum layer of clean granular material underneath to serve as a barrier for capillary rise in the soil and to minimize dampness.

Fill that may be required to establish the subgrade level along access roads should be placed and compacted in accordance with the specifications previously discussed in connection with fill to establish the subgrade level for the slab.

GENERAL QUALIFICATIONS

This report has been prepared in order to aid in the evaluation of this property and to assist the architect and/or engineer in the design of this project. The scope is limited to the specific project and location described herein and our description of the project represents our understanding of the significant aspects relevant to soil and foundation characteristics. In the event that any changes in the design and location of the building(s) as outlined in this report are planned, we should be informed so the changes can be reviewed and the conclusions of this report modified or approved in writing by the soil and foundation engineer.

It is recommended that all construction operations dealing with earthwork and foundations be inspected by an experienced soil engineer to assure that the design requirements are fulfilled in the actual construction. If you wish, we would welcome the opportunity to provide these inspection services for you during construction. In addition, we would welcome the opportunity to review the plans and specifications when they have been prepared so that we may have the opportunity of commenting on the effect of soil conditions on the design and specifications.

The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the location diagram and from any other information discussed in this report. This report does not reflect any variations which may occur between these borings. In the performance of subsurface investigations, specific information is obtained at specific locations at specific times. However, it is a well-known fact that variations in soil and rock conditions exist on most sites between boring locations and also such situations as groundwater levels vary from time to time. The nature and extent of variations may not become evident until the course of construction. If variations then appear evident, it will be necessary for a re-evaluation of the recommendations of this report after performing on-site observations during the construction period and noting the characteristics of any variations.

Because of the possibility of these unanticipated subsurface conditions occurring, we recommend that a "changed condition" clause be provided in the contract both with the general contractor and with contracts with sub-contractors involved in foundation and earthwork construction. It is felt that the inclusion of this clause will permit contractors to give lower prices because they will not need to provide as much in contingencies as they normally would if equitable adjustment of changed conditions will minimize conflicts and litigation with the attendant delays and costs. Furthermore, by the immediate recognition and

adjustment in contract price at the time the changed conditions are encountered, the immense problem of trying to recreate facts when litigation develops later is eliminated. A mediation/arbitration procedure is recommended in the event the owner, contractor and professionals do not agree on the changed conditions at the moment they are disclosed. If you wish, we would be pleased to furnish additional information pertaining to this procedure. A suggested wording for a changed condition clause is given in the appendix.

APPENDIX

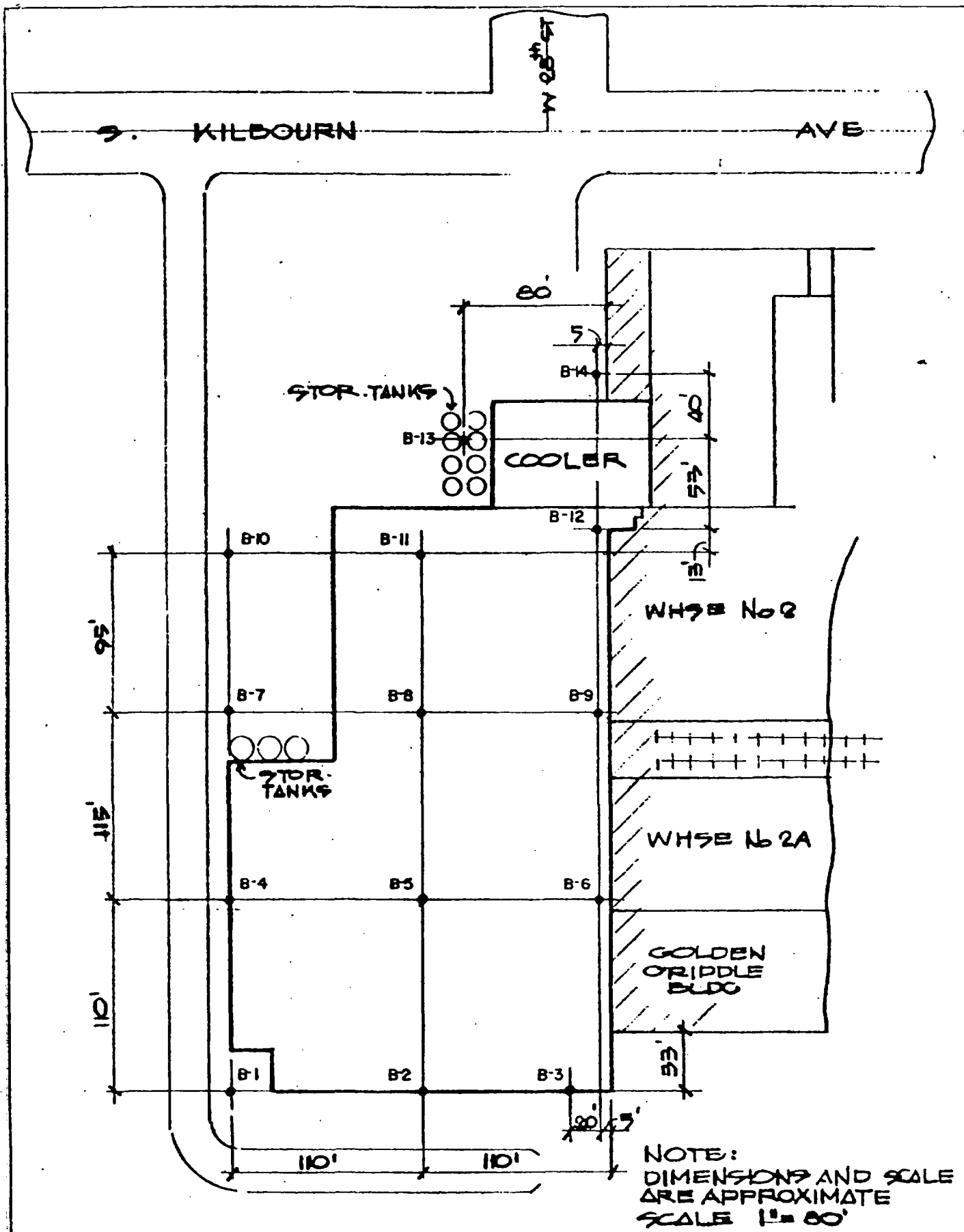
1. Standard Clause for Unanticipated Subsurface Conditions
2. Location Diagram
3. General Notes
4. Procedures Regarding Field Logs, Laboratory Data Sheets and Samples
5. Boring Logs
6. Rock Quality Designation
7. ASTM Specifications
 - D 1586-67
 - D 1587-67
 - D 2113-70
8. Unified Soil Classification System
9. Soil Characteristics Pertinent to Roads and Airfields
10. Soil Profiles (Back Pocket)

Standard Clause for Unanticipated Subsurface Conditions

"The owner has had a subsurface investigation performed by a foundation consultant, the results of which are contained in the consultant's report. The consultant's report presents his conclusions on the subsurface conditions based on his interpretation of the data obtained in the investigation. The contractor acknowledges that he has reviewed the consultant's report and any addenda thereto, and that his bid for earthwork operations is based on the subsurface conditions, as described in that report. It is recognized that a subsurface investigation may not disclose all conditions as they actually exist and further, conditions may change, particularly groundwater conditions, between the time of a subsurface investigation and the time of earthwork operations. In recognition of these facts, this clause is entered in the contract to provide a means of equitable additional compensation for the contractor if adverse unanticipated conditions are encountered and to provide a means of rebate to the owner if the conditions are more favorable than anticipated.

At any time during earthwork, paving and foundation construction operations that the contractor encounters conditions that are different than those anticipated by the foundation consultant's report, he shall immediately (within 24 hours) bring this fact to the owner's attention. If the owner's representative on the construction site observes subsurface conditions which are different than those anticipated by the foundation consultant's report, he shall immediately (within 24 hours) bring this fact to the contractor's attention. Once a fact of unanticipated conditions has been brought to the attention of either the owner or the contractor, and the consultant has concurred, immediate negotiations will be undertaken between the owner and the contractor to arrive at a change in contract price for additional work or reduction in work because of the unanticipated conditions. The contractor agrees that the following unit prices would apply for additional or reduced work under the contract. For changed conditions for which unit prices are not provided, the additional work shall be paid for on a time and material basis."

Another example of a changed conditions clause can be found in paper No. 4035 by Robert F. Borg published in ASCE Construction Division Journal, No. CO2, September 1964, page 37.



SOIL BORING LOCATION DIAGRAM
PROPOSED PLANT EXPANSION
BEST FOODS - 2816 S. KILBOURN AVE
CHICAGO ILLINOIS



SOIL TESTING SERVICES, INC.
111 PFINGSTEN ROAD
NORTHBROOK ILLINOIS 60062

MP 9JP 12.6.75 17050-B

GENERAL NOTES

1950 Chicago Building Code Soil Classifications are Used Except Where Noted

DRILLING & SAMPLING SYMBOLS

SS : Split-Spoon - 1 1/8" I.D., 2" O.D., except where noted
ST : Shelby Tube - 2" O.D., except where noted
PA : Power Auger Sample
DB : Diamond Bit - NX: BX: AX:
CB : Carbide Bit - NX: BX: AX:
OS : Osterberg Sampler - 3" Shelby Tube
HS : Housel Sampler
WS : Wash Sample
FT : Fish Tail
RB : Rock Bit
WO : Wash Out

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 inch OD split spoon, except where noted.

WATER LEVEL MEASUREMENT SYMBOLS

WL : Water Level
WCI : Wet Cave In
DCI : Dry Cave In
WS : While Sampling
WD : While Drilling
BCR : Before Casing Removal
ACR : After Casing Removal
AB : After Boring

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable ground water levels. In impervious soils, the accurate determination of ground water elevations is not possible in even several days observation, and additional evidence on ground water elevations must be sought.

CLASSIFICATION

COHESIONLESS SOILS

"Trace"	:	1% to 10%	
"Trace to some"	:	10% to 20%	
"Some"	:	20% to 35%	
"And"	:	35% to 50%	
Loose	:	0 to 9 Blows	
Medium Dense	:	10 to 29 Blows	
Dense	:	30 to 59 Blows	} or equivalent
Very Dense	:	≥ 60 Blows	

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, then clay becomes the principle noun with the other major soil constituent as modifier; i.e., silty clay. Other minor soil constituents may be added according to classification breakdown for cohesionless soils; i.e., silty clay, trace to some sand, trace gravel.

Soft	:	0.00 — 0.59 tons/ft ²
Stiff	:	0.60 — 0.99 tons/ft ²
Tough	:	1.00 — 1.99 tons/ft ²
Very tough	:	2.00 — 3.99 tons/ft ²
Hard	:	≥ 4.00 tons/ft ²

GENERAL NOTES

STS

SOIL TESTING SERVICES, INC.
111 PFINGSTEN ROAD
NORTHBROOK ILLINOIS

PROCEDURES REGARDING FIELD LOGS,
LABORATORY DATA SHEETS AND SAMPLES

In the process of obtaining and testing samples and preparing this report, procedures are followed that represent reasonable and accepted practice in the field of geotechnical engineering.

Specifically, field logs are prepared during performance of the drilling and sampling operations which are intended to portray essentially field occurrences, sampling locations and other information. Samples obtained in the field are frequently subjected to additional testing and reclassification in the laboratory by more experienced soil engineers, and differences between the field logs and the final logs exist. The engineer preparing the report reviews the field and laboratory logs, classifications and test data, and in his judgement in interpreting this data, may make further changes.

Samples taken in the field, some of which are later subjected to laboratory tests, are retained in our laboratory for sixty days and are then destroyed unless special disposition is requested by our client. Samples retained over a long period of time, even in sealed jars, are subject to moisture loss which changes the apparent strength of cohesive soil, generally increasing the strength from what was originally encountered in the field. Since they are then no longer representative of the moisture conditions initially encountered, an inspection of these samples should recognize this factor.

It is common practice in the soil and foundation engineering profession that field logs and laboratory data sheets not be included in engineering reports, because they do not represent the engineer's final opinions as to appropriate descriptions for conditions encountered in the exploration and testing work. On the other hand, we are aware that perhaps certain contractors and subcontractors submitting bids or proposals on work might have an interest in studying these documents before submitting a bid or proposal. For this reason, the field logs will be retained in our office for inspection by all contractors submitting a bid or proposal. We would welcome the opportunity to explain any changes that have and typically are made in the preparation of our final reports, to the contractor or subcontractors, before the firm submits its bid or proposal, and to describe how the information was obtained to the extent the contractor or subcontractor wishes. Results of laboratory tests are generally shown on the boring logs or are described in the text of the report as appropriate.

ROCK QUALITY DESIGNATION

Rock quality designation, RQD, developed by Dr. D. U. Deere, Professor of Civil Engineering and Geology, University of Illinois, is an indication of the rock quality in situ. The RQD is a modified core recovery percentage in which all the pieces of sound core over four inches long are counted as recovery. The smaller pieces are considered to be due to close shearing, jointing, faulting or weathering in the rock mass and are not counted. The RQD provides a preliminary estimate of the variations of the in situ rock mass properties from the properties of the "sound" portion of the rock core. Thus, a general estimate of the engineering behavior of the rock mass can be made. An RQD approaching 100% denotes an excellent quality rock mass with properties similar to that of the intact specimen. RQD values ranging from 0 to 50% are indicative of a poor quality rock mass having a small fraction of the strength and stiffness measured for an intact specimen.

Reference:

Deere, Hendron, Patton and Cording: "Design of Surface and Near-Surface Construction in Rock"; Failure and Breakage of Rock - 8th Symposium on Rock Mechanics, 1967, pages 246-253.

OWNER Best Foods					LOG OF BORING NUMBER B-1				
PROJECT NAME Proposed Plant Expansion					ARCHITECT-ENGINEER A. G. McKee & Company				
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois									
ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY					
DESCRIPTION OF MATERIAL					UNIT DRY WT. LBS./FT.³				
SURFACE ELEVATION 98.7									
	1	SS				Cinder fill - black - dense			
	2	SS				Fine sand, saturated, tan, trace dark gray - dense (SP-fill)			
	2A					Clayey topsoil - black - tough (OH)			
5.0	3	ST			105	"A"			
	3A				112	"B"			
	4	ST			118	Silty clay, trace to some sand, tr. gravel - brown, slightly grayish - hard (CL-ML, CL)			
	5	ST			116	"C"			
10.0	5A				125	Clayey silt hardpan, trace to some sand, trace gravel - gray - dense & very hard (CL-ML)			
	6	ST			118	Silty clay, trace sand & gravel - gray - very hard (CL, CL-CH)			
		RB							
15.0						Sandy, clayey silt, trace gravel - reddish brown - very hard & dense (ML-CL, SC)			
	7	ST			134				
		RB							
20.0						Dolomitic limestone, light gray, slightly porous, few solution cavities, fairly solid but fractured & jointed particularly between 18.5' & 20.3' & 21.8' to 23'			
23.5	Run 1	DB				REC = 100% RQD = 44%			
End of Boring					*Calibrated Penetrometer				
5' of 4" Casing used & 15' of NX Casing used									
"A": Silty clay, trace sand & gravel - yellow brown & light gray, dark gray pockets - tough (CL-CH)									
"B": Silty clay, trace sand & gravel - brown & gray - very tough (CL)									
"C": Silty clay, trace to some sand, trace gravel - gray - very tough (CL, CL-ML)									
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.									
WL	2'	WS OR WD	BORING STARTED 12-1-75		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062 APPROVED BY SJP STS JOB NO. 17030-8				
WL	7.5' BCR 1.5'	ACR	BORING COMPLETED 12-1-75						
WL			RIG Rotary FOREMAN Pierre						

OWNER Best Foods				LOG OF BORING NUMBER B-2			
PROJECT NAME Proposed Plant Expansion				ARCHITECT-ENGINEER A. G. McKee & Company			
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois							
ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.	<div style="text-align: center;"> ○ UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² 1 2 3 4 5 </div> <div style="text-align: center; margin-top: 10px;"> X PLASTIC LIMIT % ● WATER CONTENT % △ LIQUID LIMIT % 10 20 30 40 50 </div> <div style="text-align: center; margin-top: 10px;"> ⊗ STANDARD PENETRATION BLOWS/FT. 10 20 30 40 50 </div>
X					SURFACE ELEVATION 98.6		
		RB			Clinders, black (fill)		
	1	SS			Fine sand, saturated, tan, trace dark gray - dense (SP-fill)		
5.0	1A				Silty clay, trace sand, topsoil-like, gray to v. dark gray - tough (CL-CH ₂ OH)		
	2	ST			Silty clay, trace sand & gravel - yellow brown & light gray mottled - very tough (CL,CL-CH)	112	
	3	ST			Silty clay, trace sand & gravel - brown & gray - hard (CL)	112	
10.0		RB					
	4	ST				113	
		RB					
15.0					Sandy silty clay, trace gravel - gray - very hard & dense (CL,CL-ML)		
	5	ST				123	
		RB					
19.5		AS			Limestone rock (field observation)		
					End of Boring		
					10' of NX Casing Used		
*Calibrated Penetrometer							
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.							
WL 1.5'		WS OR WD		BORING STARTED 12-1-75		SOIL TESTING SERVICES, INC.	
WL 2'		BCR 1.5' ACR		BORING COMPLETED 12-1-75		111 PFINGSTEN ROAD	
WL		RIG Rotary FOREMAN Pierre		APPROVED BY SJR		NORTHBROOK ILLINOIS 60062	
						STS JOB NO. 17030-B	

OWNER Best Foods				LOG OF BORING NUMBER B-3			
PROJECT NAME Proposed Plant Expansion				ARCHITECT-ENGINEER A. G. McKee & Company			
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois				<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²</p> <p>1 2 3 4 5</p> <p>PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %</p> <p>10 20 30 40 50</p> <p>STANDARD PENETRATION BLOWS/FT.</p> <p>10 20 30 40 50</p> </div> <div style="width: 45%;"> </div> </div>			
ELEVATION	DEPTH	SAMPLE NO.	SAMPLE TYPE				
						SURFACE ELEVATION 98.5	
			AS			Cinder fill - black	
		1	SS			Fine sand, saturated, tan & dark gray - med. dense (SP-fill)	
		1A				"A"	
5.0		2	ST			Silty clay, trace sand & gravel - yellow brown & light gray mottled - very tough (CL,CL-CH)	
		3	ST			Silty clay, trace sand & gravel - brown & gray - hard (CL)	
			RE				
10.0		4	ST			Silty clay, trace to some sand, trace gravel - gray - hard (CL,CL-ML)	
			RE				
15.0		5	ST			Silty clay, trace sand & gravel - gray - hard to very hard (CL,CL-CH)	
			RE				
			RE			Limestone rock (field observation)	
20.0						End of Boring	*Calibrated Penetrometer
						"A": Silty clay, topsoil-like - brownish medium dark to dark gray - tough (CL-CH,OH)	
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.							
WL	3'	WS OR WD	BORING STARTED 12-2-75		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062 APPROVED BY: J.P. STS JOB NO. 17030-B		
WL	1.5' BCR	0.5' ACR	BORING COMPLETED 12-2-75				
WL			RIG Rotary FOREMAN Pierre				

OWNER Best Foods				LOG OF BORING NUMBER B-4			
PROJECT NAME Proposed Plant Expansion				ARCHITECT-ENGINEER A. G. McKee & Company			
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois				<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²</p> <p>1 2 3 4 5</p> <p>PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %</p> <p>10 20 30 40 50</p> <p>STANDARD PENETRATION BLOWS/FT.</p> <p>10 20 30 40 50</p> </div> <div style="width: 50%;"> </div> </div>			
ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY				
X				SURFACE ELEVATION 97.8			
		AS		Clinders, sand, slag, broken lime-stone, trace roots - dk. gray (fill)			
	1	SS		"A"			
	1A			"B"			
5.0	2	ST		"C"			
	2A			Silty clay, trace sand & gravel - brown, slightly grayish - hard (CL)			
	3	ST		Silty clay, trace to some sand, trace gravel - brown & gray - very tough (CL)			
		RB					
10.0							
	4	ST		Sandy, silty clay, trace gravel - gray, reddish gray & brown bands - hard & dense (CL)			
		RB					
15.0							
	5	ST		Silty clay, somewhat sandy, gravel - gray - dense & very hard (CL, CL-ML)			
		RB					
20.0							
21.0		DB		Limestone rock (field observation)			
				End of Boring		*Calibrated Penetrometer	
				5' of NX Casing Used			
				"A": Clayey & silty topsoil - black - soft (OL-OH)			
				"B": Silty clay, trace sand & gravel - light gray & yellow brown - tough (CL, CL-CH)			
				"C": Silty clay, trace sand & gravel - yellow brown, light gray streaks - very tough (CL, CL-CH)			

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.

WL 4'	WS OR WD	BORING STARTED 12-2-75	SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062 APPROVED BY SJP STS JOB NO. 17030-B
WL 12'	BCR 1.5'	BORING COMPLETED 12-2-75	
WL		RIG Rotary FOREMAN Pierre	

OWNER Best Foods				LOG OF BORING NUMBER B-5			
PROJECT NAME Proposed Plant Expansion				ARCHITECT-ENGINEER A. G. McKee & Company			
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois						<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²</p> <p>1 2 3 4 5</p> </div> <div style="width: 45%;"> <p>PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %</p> <p>10 20 30 40 50</p> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>STANDARD PENETRATION</p> <p>10 20 30 40 50</p> </div> <div style="width: 45%;"> <p>BLOWS/FT.</p> <p>10 20 30 40 50</p> </div> </div>	
ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL		
X					SURFACE ELEVATION 97.5		
		PA			5" asphalt surface on 12" of limestone base		
	1	ST			Clayey silt & fine sand, trace clinders, black, some brown clay - trace gravel - tough(est) (SC,CL-f(11))		
5.0		2			Silty clay, trace sand & gravel - brown, slightly grayish - hard (CL)		
		3			Silty clay, trace sand & gravel - gray - very tough to hard (CL)		
		RB					
10.0		4					
		RB					
15.0		5			Sandy, silty clay, trace gravel - gray - very hard (CL,CL-ML)		
		RB					
20.0		RB			Limestone rock (field observation)		
20.5					End of Boring		
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.							
WL 4.5'		WS OR WD		BORING STARTED 12-2-75		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062	
WL 1' BCR 1.5' ACR		BORING COMPLETED 12-2-75					
WL		RIG Rotary FOREMAN Pierre		APPROVED BY SJR STS JOB NO. 17030-B			

OWNER Best Foods				LOG OF BORING NUMBER B-6																																																																																																																						
PROJECT NAME Proposed Plant Expansion				ARCHITECT-ENGINEER A. G. McKee & Company																																																																																																																						
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois																																																																																																																										
<table border="1"> <thead> <tr> <th>ELEVATION DEPTH</th> <th>SAMPLE NO.</th> <th>SAMPLE TYPE</th> <th>SAMPLE DISTANCE</th> <th>RECOVERY</th> <th>DESCRIPTION OF MATERIAL</th> <th>UNIT DRY WT. LBS./FT.³</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>SURFACE ELEVATION 97.7</td> <td></td> </tr> <tr> <td></td> <td></td> <td>PA</td> <td></td> <td></td> <td>Crushed limestone (field observation)</td> <td></td> </tr> <tr> <td>5.0</td> <td>1</td> <td>SS</td> <td></td> <td></td> <td>Limestone screenings (up to fine gravel size) - loose (fill)</td> <td></td> </tr> <tr> <td></td> <td>1A</td> <td></td> <td></td> <td></td> <td>Silty sand followed by silty & clayey topsoil - black - soft to stiff (OL, OH)</td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>SS</td> <td></td> <td></td> <td>Silty clay, trace sand & gravel - brown & gray - tough (CL, CL-CH)</td> <td></td> </tr> <tr> <td></td> <td>3</td> <td>ST</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10.0</td> <td></td> <td>RB</td> <td></td> <td></td> <td>Silty clay, trace sand & gravel - brown, slightly grayish to brown & gray - very tough (CL)</td> <td></td> </tr> <tr> <td></td> <td>4</td> <td>ST</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>4A</td> <td></td> <td></td> <td></td> <td>Silty clay, gray - hard with seams & pockets of dense & hard clayey sand (CL & SC)</td> <td></td> </tr> <tr> <td></td> <td></td> <td>RB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>15.0</td> <td></td> <td></td> <td></td> <td></td> <td>Clayey silt hardpan, trace to some sand, trace gravel - gray - dense & very hard (CL, CL-ML)</td> <td></td> </tr> <tr> <td></td> <td>5</td> <td>ST</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>RB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>20.0</td> <td></td> <td>RB</td> <td></td> <td></td> <td>Limestone rock (field observation)</td> <td></td> </tr> <tr> <td>20.5</td> <td></td> <td></td> <td></td> <td></td> <td>End of Boring</td> <td>*Calibrated Penetrometer</td> </tr> <tr> <td colspan="6">10' of NX Casing Used</td> <td></td> </tr> </tbody> </table>								ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³						SURFACE ELEVATION 97.7				PA			Crushed limestone (field observation)		5.0	1	SS			Limestone screenings (up to fine gravel size) - loose (fill)			1A				Silty sand followed by silty & clayey topsoil - black - soft to stiff (OL, OH)			2	SS			Silty clay, trace sand & gravel - brown & gray - tough (CL, CL-CH)			3	ST					10.0		RB			Silty clay, trace sand & gravel - brown, slightly grayish to brown & gray - very tough (CL)			4	ST						4A				Silty clay, gray - hard with seams & pockets of dense & hard clayey sand (CL & SC)				RB					15.0					Clayey silt hardpan, trace to some sand, trace gravel - gray - dense & very hard (CL, CL-ML)			5	ST							RB					20.0		RB			Limestone rock (field observation)		20.5					End of Boring	*Calibrated Penetrometer	10' of NX Casing Used		
ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³																																																																																																																				
					SURFACE ELEVATION 97.7																																																																																																																					
		PA			Crushed limestone (field observation)																																																																																																																					
5.0	1	SS			Limestone screenings (up to fine gravel size) - loose (fill)																																																																																																																					
	1A				Silty sand followed by silty & clayey topsoil - black - soft to stiff (OL, OH)																																																																																																																					
	2	SS			Silty clay, trace sand & gravel - brown & gray - tough (CL, CL-CH)																																																																																																																					
	3	ST																																																																																																																								
10.0		RB			Silty clay, trace sand & gravel - brown, slightly grayish to brown & gray - very tough (CL)																																																																																																																					
	4	ST																																																																																																																								
	4A				Silty clay, gray - hard with seams & pockets of dense & hard clayey sand (CL & SC)																																																																																																																					
		RB																																																																																																																								
15.0					Clayey silt hardpan, trace to some sand, trace gravel - gray - dense & very hard (CL, CL-ML)																																																																																																																					
	5	ST																																																																																																																								
		RB																																																																																																																								
20.0		RB			Limestone rock (field observation)																																																																																																																					
20.5					End of Boring	*Calibrated Penetrometer																																																																																																																				
10' of NX Casing Used																																																																																																																										
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.																																																																																																																										
WL 3.5'		WS OR WD		BORING STARTED 12-2-75		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062																																																																																																																				
WL 0.5' BCR		1.5' ACR		BORING COMPLETED 12-2-75																																																																																																																						
WL				RIG Rotary FOREMAN Pierre																																																																																																																						
				APPROVED BY Jp		STS JOB NO. 17030-B																																																																																																																				

OWNER Best Foods				LOG OF BORING NUMBER B-7				
PROJECT NAME Proposed Plant Expansion				ARCHITECT-ENGINEER A. G. McKee & Company				
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois								
ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²		
						1	2	3
						PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %		
						10 20 30 40 50		
						STANDARD PENETRATION BLOWS/FT.		
						10 20 30 40 50		
				SURFACE ELEVATION 97.1				
	1	SS		"A"				
	1A			Silty & clayey topsoil, trace brick chips - tough (OL-OH; some is fill)				
5.0	2	ST		Silty clay, trace sand & gravel - yellow brown & light gray, pockets of dk. gray - very tough (CL)	110			
	3	ST		Silty clay, trace sand & gravel - brown, trace gray to brown & gray - hard to very tough (CL)	113			
	4	ST			113			
10.0	5	ST		Silty clay, trace to some sand, trace gravel - brownish gray to gray (10') - very tough (CL)	119			
	6	ST			120			
	6A			Clayey silt, trace to some sand, trace gravel - gray - dense & very hard (CL, ML-CL)	126			
15.0		RB						
	7	ST			125			
		RB						
20.0	8	ST			130			
		RB						
25.0	Run 1	DB		Dolomitic limestone, light gray, few solution cavities, solid but fractured & jointed between 22' & 22½' & 23.1 to 23.5'				
27.0								
				End of Boring				
				15' of NX Casing Used				
				"A": Crushed stone, some topsoil & broken mortar, trace wood (fill)				
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.								
WL	WS OR WD		BORING STARTED 11-26-75		SOIL TESTING SERVICES, INC.			
WL 4'	BCR	7'	ACR	BORING COMPLETED 11-26-75	111 PFINGSTEN ROAD			
WL			RIG Rotary FOREMAN Pierre		NORTHBROOK ILLINOIS 60062			
					APPROVED BY JJP		STS JOB NO. 17030-B	

OWNER Best Foods				LOG OF BORING NUMBER B-8																																																																																																								
PROJECT NAME Proposed Plant Expansion				ARCHITECT-ENGINEER A. G. McKee & Company																																																																																																								
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois				<div style="text-align: center;"> </div>																																																																																																								
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;">ELEVATION DEPTH</th> <th style="width:5%;">SAMPLE NO.</th> <th style="width:5%;">SAMPLE TYPE</th> <th style="width:5%;">SAMPLE DISTANCE</th> <th style="width:5%;">RECOVERY</th> <th style="width:40%;">DESCRIPTION OF MATERIAL</th> <th style="width:10%;">UNIT DRY WT. LBS./FT.³</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>PA</td> <td></td> <td></td> <td>SURFACE ELEVATION 96.5 3" asphalt on 7" of crushed stone base</td> <td></td> </tr> <tr> <td>5.0</td> <td>1</td> <td>ST</td> <td></td> <td></td> <td>Silty clay w/ few pieces of coal & some ashes, gray, med.dk.gray & black-tough (fill)</td> <td>91</td> </tr> <tr> <td></td> <td>2</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace sand & gravel - yellow brown & light gray - tough (CL,CL-CH)</td> <td>104</td> </tr> <tr> <td></td> <td>3</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace sand & gravel - brown & gray to brown, somewhat grayish - very tough (CL)</td> <td></td> </tr> <tr> <td>10.0</td> <td></td> <td>RB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>4</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace sand & gravel, seams of sand - gray, trace brown-very tough (CL)</td> <td></td> </tr> <tr> <td></td> <td></td> <td>RB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>15.0</td> <td></td> <td></td> <td></td> <td></td> <td>Clayey silt hardpan, trace to some sand, trace gravel - gray - dense & very hard (CL,ML-CL)</td> <td></td> </tr> <tr> <td></td> <td>5</td> <td>ST</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>RB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>20.0</td> <td></td> <td></td> <td></td> <td></td> <td>Clayey silt & silt - gray - dense & hard - (ML-CL & ML)</td> <td></td> </tr> <tr> <td>21.0</td> <td>6</td> <td>ST</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>End of Boring</td> <td>*Calibrated Penetrometer</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>10' of NX Casing Used</td> <td></td> </tr> </tbody> </table>								ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³			PA			SURFACE ELEVATION 96.5 3" asphalt on 7" of crushed stone base		5.0	1	ST			Silty clay w/ few pieces of coal & some ashes, gray, med.dk.gray & black-tough (fill)	91		2	ST			Silty clay, trace sand & gravel - yellow brown & light gray - tough (CL,CL-CH)	104		3	ST			Silty clay, trace sand & gravel - brown & gray to brown, somewhat grayish - very tough (CL)		10.0		RB						4	ST			Silty clay, trace sand & gravel, seams of sand - gray, trace brown-very tough (CL)				RB					15.0					Clayey silt hardpan, trace to some sand, trace gravel - gray - dense & very hard (CL,ML-CL)			5	ST							RB					20.0					Clayey silt & silt - gray - dense & hard - (ML-CL & ML)		21.0	6	ST										End of Boring	*Calibrated Penetrometer			
ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³																																																																																																						
		PA			SURFACE ELEVATION 96.5 3" asphalt on 7" of crushed stone base																																																																																																							
5.0	1	ST			Silty clay w/ few pieces of coal & some ashes, gray, med.dk.gray & black-tough (fill)	91																																																																																																						
	2	ST			Silty clay, trace sand & gravel - yellow brown & light gray - tough (CL,CL-CH)	104																																																																																																						
	3	ST			Silty clay, trace sand & gravel - brown & gray to brown, somewhat grayish - very tough (CL)																																																																																																							
10.0		RB																																																																																																										
	4	ST			Silty clay, trace sand & gravel, seams of sand - gray, trace brown-very tough (CL)																																																																																																							
		RB																																																																																																										
15.0					Clayey silt hardpan, trace to some sand, trace gravel - gray - dense & very hard (CL,ML-CL)																																																																																																							
	5	ST																																																																																																										
		RB																																																																																																										
20.0					Clayey silt & silt - gray - dense & hard - (ML-CL & ML)																																																																																																							
21.0	6	ST																																																																																																										
					End of Boring	*Calibrated Penetrometer																																																																																																						
					10' of NX Casing Used																																																																																																							
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.																																																																																																												
WL		WS OR WD		BORING STARTED 12-2-75		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062 APPROVED BY SJR STS JOB NO. 17030-B																																																																																																						
WL		DCR		BORING COMPLETED 12-2-75																																																																																																								
WL				RIG Rotary FOREMAN Pierre																																																																																																								

OWNER Best Foods					LOG OF BORING NUMBER B-9				
PROJECT NAME Proposed Plant Expansion					ARCHITECT-ENGINEER A. G. McKee & Company				
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois					<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²</p> <p>1 2 3 4 5</p> </div> <div style="width: 45%;"> <p>PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %</p> <p>10 20 30 40 50</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <p>STANDARD PENETRATION 10 20 30 40 50</p> </div> <div style="width: 45%;"> <p>BLOWS/FT.</p> </div> </div>				
ELEVATION	DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE					
						SURFACE ELEVATION 95.7			
			PA			3" asphalt surface on 12" crushed stone base			
		1	ST			Silty clay, trace sand & gravel - yellow brown & light gray mottled very tough (CL,CL-CH)	109		
5.0		2	ST			Silty clay, trace sand & gravel - brown & gray - very tough to hard (CL)			
		3	ST			Sandy, silty clay; silt seams - gray - very hard (CL,CL-ML)			
			RB						
10.0		4	ST			Sandy, clayey silt hardpan, trace gravel - gray - very hard (ML-CL)			
			RB						
15.0		5	ST			Silty clay, trace to some sand, trace gravel - gray - very hard (CL)			
			RB						
20.0		6	ST			Clayey silt & fine sand, trace gravel - moist - slightly cohesive - dense & hard (ML-CL)			
21.0						End of Boring			
						10' of NX Casing Used	*Calibrated Penetrometer		
<p style="font-size: small;">THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.</p>									
WL		WS OR WD		BORING STARTED 12-3-75		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062 APPROVED BY SJP STS JOB NO. 17030-B			
WL 6'		PCR 6' ACR		BORING COMPLETED 12-3-75					
WL				RIG Rotary FOREMAN Pierre					

OWNER Best Foods				LOG OF BORING NUMBER B-11																																																																																																	
PROJECT NAME Proposed Plant Expansion				ARCHITECT-ENGINEER A. G. McKee & Company																																																																																																	
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois				<div style="text-align: center;"> </div>																																																																																																	
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;">ELEVATION</th> <th style="width:5%;">DEPTH</th> <th style="width:10%;">SAMPLE NO.</th> <th style="width:10%;">SAMPLE TYPE</th> <th style="width:10%;">SAMPLE DISTANCE</th> <th style="width:10%;">RECOVERY</th> <th style="width:50%;">DESCRIPTION OF MATERIAL</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>PA</td> <td></td> <td></td> <td>SURFACE ELEVATION 96.3 "A"</td> </tr> <tr> <td></td> <td></td> <td>1</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, topsoil-like - brownish very dark gray - black bands - very tough (CL-CH, OH)</td> </tr> <tr> <td></td> <td>5.0</td> <td>2</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace sand & gravel - br., yellow br. - light gray; few silt seams - hard (CL)</td> </tr> <tr> <td></td> <td></td> <td>3</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace sand & gravel - brown & gray - hard (CL)</td> </tr> <tr> <td></td> <td></td> <td>3A</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>PA</td> <td></td> <td></td> <td>Sandy, silty clay - gray - hard (CL, CL-ML)</td> </tr> <tr> <td></td> <td>10.0</td> <td>4</td> <td>ST</td> <td></td> <td></td> <td>Sandy, silty clay & very hard & dense clayey silt & fine sand seams & layers - fairly cohesive - gray (CL & ML-CL)</td> </tr> <tr> <td></td> <td></td> <td></td> <td>PA</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>15.0</td> <td>5</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace to some sand, trace gravel - gray - hard (CL)</td> </tr> <tr> <td></td> <td></td> <td></td> <td>PA</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>20.0</td> <td>6</td> <td>ST</td> <td></td> <td></td> <td>Clayey silt hardpan, slightly to moderately cohesive - trace to some fine sand, trace gravel - dense & very hard (ML-CL)</td> </tr> <tr> <td></td> <td>21.0</td> <td></td> <td></td> <td></td> <td></td> <td>End of Boring</td> </tr> <tr> <td colspan="7" style="vertical-align: top;"> "A": 3" asphalt surface on 12" limestone base (field observation). 10' of NX Casing Used </td> </tr> </tbody> </table>								ELEVATION	DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL				PA			SURFACE ELEVATION 96.3 "A"			1	ST			Silty clay, topsoil-like - brownish very dark gray - black bands - very tough (CL-CH, OH)		5.0	2	ST			Silty clay, trace sand & gravel - br., yellow br. - light gray; few silt seams - hard (CL)			3	ST			Silty clay, trace sand & gravel - brown & gray - hard (CL)			3A								PA			Sandy, silty clay - gray - hard (CL, CL-ML)		10.0	4	ST			Sandy, silty clay & very hard & dense clayey silt & fine sand seams & layers - fairly cohesive - gray (CL & ML-CL)				PA					15.0	5	ST			Silty clay, trace to some sand, trace gravel - gray - hard (CL)				PA					20.0	6	ST			Clayey silt hardpan, slightly to moderately cohesive - trace to some fine sand, trace gravel - dense & very hard (ML-CL)		21.0					End of Boring	"A": 3" asphalt surface on 12" limestone base (field observation). 10' of NX Casing Used		
ELEVATION	DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL																																																																																															
			PA			SURFACE ELEVATION 96.3 "A"																																																																																															
		1	ST			Silty clay, topsoil-like - brownish very dark gray - black bands - very tough (CL-CH, OH)																																																																																															
	5.0	2	ST			Silty clay, trace sand & gravel - br., yellow br. - light gray; few silt seams - hard (CL)																																																																																															
		3	ST			Silty clay, trace sand & gravel - brown & gray - hard (CL)																																																																																															
		3A																																																																																																			
			PA			Sandy, silty clay - gray - hard (CL, CL-ML)																																																																																															
	10.0	4	ST			Sandy, silty clay & very hard & dense clayey silt & fine sand seams & layers - fairly cohesive - gray (CL & ML-CL)																																																																																															
			PA																																																																																																		
	15.0	5	ST			Silty clay, trace to some sand, trace gravel - gray - hard (CL)																																																																																															
			PA																																																																																																		
	20.0	6	ST			Clayey silt hardpan, slightly to moderately cohesive - trace to some fine sand, trace gravel - dense & very hard (ML-CL)																																																																																															
	21.0					End of Boring																																																																																															
"A": 3" asphalt surface on 12" limestone base (field observation). 10' of NX Casing Used																																																																																																					
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.																																																																																																					
WL WL 4' WL		WS OR WD BCR 1.5' ACR		BORING STARTED 12-2-75 BORING COMPLETED 12-2-75 RIG Rotary FOREMAN Pierre		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062 APPROVED BY SJR STS JOB NO. 17030-B																																																																																															

OWNER Best Foods					LOG OF BORING NUMBER B-10				
PROJECT NAME Proposed Plant Expansion					ARCHITECT-ENGINEER A. G. McKee & Company				
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois					<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²</p> <p>1 2 3 4 5</p> <p>PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %</p> <p>10 20 30 40 50</p> <p>STANDARD PENETRATION BLOWS/FT.</p> <p>10 20 30 40 50</p> </div> <div style="width: 45%;"> </div> </div>				
ELEVATION	DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE					
						SURFACE ELEVATION 97.4			
			PA			"A"			
		1	SS			Clayey silt, topsoil-like, piece of coal - black - very tough - some is possibly fill			
		1A				Silty clay, trace sand - yellow br. & gray to med. dark gray - very tough (CL, CL-CH)			
5.0		2	ST						
		3	ST			Silty clay, trace sand & gravel - brown, slightly grayish to brown & gray - hard (CL)			
			RB						
10.0		4	ST			Silty clay, trace to some sand, gray, trace brown w/ seams of dense clayey silt & sand - hard (CL-ML) & (ML-CL)			
			RB						
15.0		5	ST			Layers & seams of silty clay & clayey silt - gray - hard & dense (CL & ML-CL)			
			RB						
20.0		6	ST			Silty clay, trace to some sand, trace gravel - gray - hard (CL)			
21.0						End of Boring			
							*Calibrated Penetrometer		
"A": Clay fill with some cinders, trace brick chips (field observation) 15' of NX Casing Used									
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.									
WL	3'	WS OR WD		BORING STARTED 12-2-75		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062 APPROVED BY: SJP STS JOB NO. 17030-B			
WL	4'	BCR	1.5'	ACR	BORING COMPLETED 12-2-75				
WL	RIG Rotary FOREMAN Pierre								

OWNER Best Foods					LOG OF BORING NUMBER B-12				
PROJECT NAME Proposed Plant Expansion					ARCHITECT-ENGINEER A. G. McKee & Company				
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois					<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²</p> <p>1 2 3 4 5</p> <p>PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %</p> <p>10 20 30 40 50</p> <p>STANDARD PENETRATION BLOWS/FT.</p> <p>10 20 30 40 50</p> </div> <div style="width: 50%;"> </div> </div>				
ELEVATION	DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE					
SURFACE ELEVATION <u>95.5</u>						<p>UNIT DRY WT. LBS./FT.³</p>			
7" concrete on 9" crushed limestone - (field observation)									
1 ST Silty clay, trace sand & gravel - yellow brown & lt. gray mottled - very tough (CL, CL-CH)									
2 ST Silty clay, trace to some sand, trace gravel - gray, trace brown - very tough to hard (CL)									
3 ST Silty clay, trace to some sand, trace gravel, gray; brown sand seams - hard (CL)									
4 ST Sandy, silty clay, trace gravel - gray - between hard & very hard (CL, CL-ML)									
5 ST Clayey silt & fine sand, trace gravel, slightly to moderately cohesive - moist - gray - dense & very hard (ML-CL)									
6 ST									
End of Boring						*Calibrated Penetrometer			
5' of NX Casing Used									
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.									
WL		WS OR WD		BORING STARTED 12-3-75		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062			
WL 7' BCR		5' ACR		BORING COMPLETED 12-3-75					
WL				RIG Rotary FOREMAN Pierre					
						APPROVED BY SJP STS JOB NO. 17030-B			

OWNER Best Foods					LOG OF BORING NUMBER B-13																																																																																																																													
PROJECT NAME Proposed Plant Expansion					ARCHITECT-ENGINEER A. B. McKee & Company																																																																																																																													
SITE LOCATION 2816 South Kilbourn Avenue, Chicago, Illinois					<p>UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²</p> <p>PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %</p> <p>STANDARD PENETRATION BLOWS/FT.</p>																																																																																																																													
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>ELEVATION DEPTH</th> <th>SAMPLE NO.</th> <th>SAMPLE TYPE</th> <th>SAMPLE DISTANCE</th> <th>RECOVERY</th> <th>DESCRIPTION OF MATERIAL</th> <th>UNIT DRY WT. LBS./FT.³</th> </tr> </thead> <tbody> <tr> <td>96.0</td> <td></td> <td></td> <td></td> <td></td> <td>SURFACE ELEVATION 96.0</td> <td></td> </tr> <tr> <td></td> <td></td> <td>RB</td> <td></td> <td></td> <td>"A"</td> <td></td> </tr> <tr> <td></td> <td>1</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace sand & gravel - brown & gray to med. dark gray - hard (CL,CL-CH)</td> <td>116</td> </tr> <tr> <td>5.0</td> <td>2</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace sand & gravel - yellow brown & light gray mottled - very tough to hard (CL,CL-CH)</td> <td>110</td> </tr> <tr> <td></td> <td>3</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace to some sand, tr. gravel - brown, slightly grayish - very hard (CL)</td> <td>118</td> </tr> <tr> <td>10.0</td> <td>4</td> <td>ST</td> <td></td> <td></td> <td></td> <td>123</td> </tr> <tr> <td></td> <td>5</td> <td>ST</td> <td></td> <td></td> <td>Silty clay, trace to some sand, trace gravel - gray - very hard (CL,CL-ML)</td> <td>123</td> </tr> <tr> <td>15.0</td> <td></td> <td>RB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>6</td> <td>ST</td> <td></td> <td></td> <td></td> <td>126</td> </tr> <tr> <td></td> <td></td> <td>RB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>20.0</td> <td>7</td> <td>ST</td> <td></td> <td></td> <td></td> <td>121</td> </tr> <tr> <td></td> <td>7A</td> <td></td> <td></td> <td></td> <td>Silt, trace clay - moist - gray - dense to very dense (ML)</td> <td>116</td> </tr> <tr> <td></td> <td></td> <td>RB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>25.0</td> <td>8</td> <td>ST</td> <td></td> <td></td> <td></td> <td>128</td> </tr> <tr> <td></td> <td></td> <td>RB</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>30.0</td> <td>Run 1</td> <td>DB</td> <td></td> <td></td> <td>Dolomite limestone, light gray - slightly porous, dense but somewhat fractured and jointed particularly from 21' to 22.8'</td> <td>REC= 90% RQD=76%</td> </tr> <tr> <td>31.0</td> <td></td> <td></td> <td></td> <td></td> <td>End of Boring 25' of 4" Casing "A": 2.5" asphalt surface on 12" crushed limestone base (field observation)</td> <td>*Calibrated Penetrometer</td> </tr> </tbody> </table>										ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	96.0					SURFACE ELEVATION 96.0				RB			"A"			1	ST			Silty clay, trace sand & gravel - brown & gray to med. dark gray - hard (CL,CL-CH)	116	5.0	2	ST			Silty clay, trace sand & gravel - yellow brown & light gray mottled - very tough to hard (CL,CL-CH)	110		3	ST			Silty clay, trace to some sand, tr. gravel - brown, slightly grayish - very hard (CL)	118	10.0	4	ST				123		5	ST			Silty clay, trace to some sand, trace gravel - gray - very hard (CL,CL-ML)	123	15.0		RB						6	ST				126			RB					20.0	7	ST				121		7A				Silt, trace clay - moist - gray - dense to very dense (ML)	116			RB					25.0	8	ST				128			RB					30.0	Run 1	DB			Dolomite limestone, light gray - slightly porous, dense but somewhat fractured and jointed particularly from 21' to 22.8'	REC= 90% RQD=76%	31.0	
ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³																																																																																																																												
96.0					SURFACE ELEVATION 96.0																																																																																																																													
		RB			"A"																																																																																																																													
	1	ST			Silty clay, trace sand & gravel - brown & gray to med. dark gray - hard (CL,CL-CH)	116																																																																																																																												
5.0	2	ST			Silty clay, trace sand & gravel - yellow brown & light gray mottled - very tough to hard (CL,CL-CH)	110																																																																																																																												
	3	ST			Silty clay, trace to some sand, tr. gravel - brown, slightly grayish - very hard (CL)	118																																																																																																																												
10.0	4	ST				123																																																																																																																												
	5	ST			Silty clay, trace to some sand, trace gravel - gray - very hard (CL,CL-ML)	123																																																																																																																												
15.0		RB																																																																																																																																
	6	ST				126																																																																																																																												
		RB																																																																																																																																
20.0	7	ST				121																																																																																																																												
	7A				Silt, trace clay - moist - gray - dense to very dense (ML)	116																																																																																																																												
		RB																																																																																																																																
25.0	8	ST				128																																																																																																																												
		RB																																																																																																																																
30.0	Run 1	DB			Dolomite limestone, light gray - slightly porous, dense but somewhat fractured and jointed particularly from 21' to 22.8'	REC= 90% RQD=76%																																																																																																																												
31.0					End of Boring 25' of 4" Casing "A": 2.5" asphalt surface on 12" crushed limestone base (field observation)	*Calibrated Penetrometer																																																																																																																												
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.																																																																																																																																		
WL		WS OR WD		BORING STARTED 11-25-75		SOIL TESTING SERVICES, INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062 APPROVED BY SJP STS JOB NO. 17030-B																																																																																																																												
WL 10'		BCR 7' ACR		BORING COMPLETED 11-25-75																																																																																																																														
WL				RIG Rotary FOREMAN Pierre																																																																																																																														

OWNER				LOG OF BORING NUMBER			
Best Foods				B-14			
PROJECT NAME				ARCHITECT-ENGINEER			
Proposed Plant Expansion				A. G. McKee & Company			
SITE LOCATION							
2816 South Kilbourn Avenue, Chicago, Illinois							
ELEVATION DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ² 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % STANDARD PENETRATION BLOWS/FT.
95.0					SURFACE ELEVATION 95.0		
5.0	1	ST			"A"		
	2	ST			Silty clay, trace sand & gravel - yellow brown & light gray mottled - very tough (CL,CL-CH)		
10.0	3	ST			Silty clay, trace sand & gravel - brownish gray - hard (CL)		
	4	ST			Silty clay, trace to some sand, trace gravel - gray - very tough to hard (CL,CL-ML)		
15.0	5	ST			Clayey silt & fine sand, trace gravel - slightly to moderately cohesive - moist - dense & very hard (ML-CL)		
20.0	6	ST			Silt, trace clay - moist - gray - dense (ML)		
21.0					End of Boring		*Calibrated Penetrometer
"A": 5" asphalt surface on 7" of crushed limestone base 5' of NX Casing Used							